## REMARKS

Claims 1-42 are pending in the application. Claims 1-10, 12-32 and 34-42 stand rejected to by the Examiner. Claims 11 and 33 are objected to by the Examiner. The Examiner's objections and rejections are addressed below in substantially the same order as in the office action.

### CLAIM OBJECTIONS

Claim 36 is objected to because of the following informalities: the recitation of "pumping the fluid into the production fluid" should most likely be—pumping the chemical into the production fluid--. Applicant has revised the claim accordingly.

### REJECTIONS UNDER 35 USC § 103

Claims 1-10, 12-14, 16-32 and 34-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6,772,840 to Headworth in view of US patent 6,539,778 to Tucker et al. The Examiner contends that one skilled in the art would have been obvious to one skilled in the art to replace the chemical injection system taught by Headworth with the subsea vehicle of Tucker et al. The Examiner further contends that one skilled in the art would have been motivated to make such a combination because the elimination of the surface pumps, long distances of tubing, and other associated equipment reduces the overall costs and maintenance requirements of the operation.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488,

20 USPQ2d 1438 (Fed. Cir. 1991). For the reasons presented below, Applicant respectfully submits that the Examiner has not established a prima facie case of obviousness.

*1. There is Motivation to Combine Headworth with Tucker et al.*

In the background of the invention, Tucker et al. expressly recite the context in which the described provides advantages:

> The dewatering of a subsea pipeline by the prior art has been at surface level, usually on a surface vessel, boat, structure or platform. This requires that long lines of coiled tubing, hose, or pipe, be used. The prior art method uses large distances of coiled tubing, hose, or pipe, to connect the pipeline to a pump mobilized on the deck of a support vessel to remove the water and dry the line before product is allowed to pass through the line. Also required by the prior art method are large pumps, compressors, compressor boosters and surface support vessel and/or vessels, to support the large volume of compressed gases and fluids pumped through the significant distances to fill the new portion of the pipeline with the gas and fluids.
>
> The method of the present invention eliminates the larger volume of compressed gas and fluids, the higher pressure of the compressed gas and fluids, the large pumps/compressors, compressor boosters, long distances of coiled tubing/hose/pipe, and substantial surface support vessel/vessels, all required by the prior art methods.

However, Headworth is not directed to the problem of dewatering of a subsea pipe line and drying the pipe line "before product is allowed to pass through the line." Rather, Headworth is used while product is passing through the pipe line and requires substantially different equipment. Thus, replacing the chemical injection system taught by Headworth with the subsea vehicle of Tucker et al. would create more problems that it solves. Headworth describes the equipment and tooling needed to deploy coiled tubing into a seabed flow line:

> Referring now to FIG. 2, coiled tubing 80 may be inserted and installed inside flowline 70 using coiled tubing techniques. *At the surface 45, an operational system 47 includes the* ***power supply*** *118, the* ***surface processor*** *120, and a* ***powered coiled tubing spool*** *or reel 94.* The powered reel 94 feeds the coiled tubing 80 over a **guide** 124 and into an **injector head**

> **unit** 126. *The injector head unit 20 feeds and directs coiled tubing 80 from the spool 94 through* ***blowout preventers*** *128 and* ***stuffing box*** *130 and into the flowline riser portion 64.* The injection of coiled tubing 80 is a continuous operation as compared to the installation of jointed pipe. Although FIG. 2 illustrates installing coiled tubing 80 from platform 42, it should be appreciated that coiled tubing 80 may be injected into any point in the flowline 50 using standard coiled tubing installation techniques. Col. 17, lines 27-43.

Thus, at least the following coiled tubing deployment equipment—not just the surface pump--must be moved from a surface location to the sea bed:

1. a power supply
2. a processor
3. powered coiled tubing spool
4. a guide
5. an injector head unit
6. a blowout preventers
7. a stuffing box

Clearly, the proposed combination of Headworth and Tucker et al does not eliminate the need for "associated equipment." Rather, the equipment listed above has been moved from an accessible surface location to a relatively inaccessible seabed location. The Tucker et al arrangement did not require moving a coiled tubing deployment system from the water's surface to a sea bed. Accordingly, the advantages discussed by Tucker et al to do not correspond to the system of Headworth, which does require a coiled tubing deployment system and one skilled in the art would understand that moving a coiled tubing deployment system to a sea bed location would increase the overall costs and maintenance requirements of the operation because all of the equipment listed above would necessarily have to be positioned and operated at the seabed. Thus, Applicant submits that Tucker et al does not suggest a combination with Headworth with Tucker et al.

*2. There is no reasonable expectation of success*

As discussed above, Headworth and Tucker et al. disclosed systems directed to separate and unrelated functions. Headworth is directed to a

system used in connection with production of hydrocarbons and improving flow of a produced fluid; *i.e.*, Headworth uses coiled tubing in the flow line to flow material into a production fluid flowing in the flow line. In contrast, Tucker et al. is directed to a system for cleaning a flow line used before the production of hydrocarbons. The system of Tucker et al. is never used while hydrocarbons are flowing in the flow line. The system of Headworth is described as deployed via a riser at the surface. Headworth does not teach or even suggest any other method of deploying coiled tubing into the flow line. Tucker et al is described as being deployed subsea to propel seawater and a pig through a flow line. Tucker et al has no suggestion of how to deploy any tubular through the flow line. Given the disparate and mutually exclusive teachings of Headworth and Tucker et al., Applicant submits that one skilled in the art would have no reasonable expectation of success in melding the teachings of Headworth and Tucker et al.

*3. The Prior Art does not Teach All of Claim Limitation*

Applicant submits that Headworth and Tucker et al cannot be combined in a manner that teaches all the recitations of the pending claims. The independent claims recite in part a surface chemical supply unit for supplying at least one chemical to a selected subsea location and a subsea chemical injection.

The Examiner contends that Headworth teaches a surface supply but concedes that Headworth does not teach a subsea chemical injection unit.

The Examiner further contends that Tucker et al. teaches the subsea chemical injection missing from Headworth. However, Tucker also teaches a subsea supply. Specifically, Tucker et al uses sea water and air (see pack 70). This clearly has to be the case because Tucker et al teaches that umbilicals to the surface are eliminated with the disclosed system.

Thus, to reject the claims, the Examiner has picked the pump of Tucker et al while retaining the surface supply of Headworth. If the supply is still at the surface, then a tubular from the surface would be needed to supply the subsea pump. However, the elimination of that tubular is the reason the Examiner gives for combining Headworth and Tucker et al. In all fairness, the Examiner cannot have it both ways.

For the above reasons, Applicant submits that independent claims 1, 12 and 34 and all claims depending therefrom are allowable over the cited art and are in condition for allowance.

Claims 11, 15 and 33

Claim 15 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Headworth in view of Tucker et al as applied to claim 14, and further in view of US patent 6,21,489 to Tubel et al. Claim 15 depends from a claim believed to be in condition for allowance and is believed to be allowable on at least those grounds.

Claims 11 and 33 stand objected to as being dependent upon a rejected base claim. Claims 11 and 13 depend from a claim believed to be in condition for allowance and are believed to be allowable on at least those grounds.

## CONCLUSION

For all the foregoing reasons, Applicant submits that the application is in a condition for allowance. No fee is believed due for this paper. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. **02-0429 (194-26936-US)**.

Respectfully submitted,

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**CERTIFICATE OF FACSIMILE TRANSMISSION**

I do hereby certify that this correspondence is being transmitted via facsimile, to the Commissioner for Patents, Examiner **Thomas S. Bomar,** facsimile no. (571) 273-8300, on this 30th day of June 2006.

Margaret A. Pruitt